

THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

REPORT ON THE TASK FORCE ON ENSURING SCIENTIFIC EXCELLENCE

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ENSURING SCIENTIFIC EXCELLENCE

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I. INTRODUCTION

Terms of Reference

The President in his July 13 memo to the members requested the Task Force on Excellence in Science to advise him on how best to preserve and expand excellence in science while deploying professional staff to one or more program initiatives as part of multidisciplinary teams, whether in head office or the field.

The President specifically asked the Task Force to present him with structural and managerial suggestions (options) for balancing the imperatives of scientific excellence and multidisciplinary team work, laying out the pros and cons of each option.

In the very short time available to it, the Task Force focused on this mandate and did not deal with several other important issues such as the role of the Senior Management group and the need for complementary services to ensure excellence in research management, such as the Library, IDRC publications, Awards and Scholarships etc.

Statement of the Problem

The Board of Governors has decided that IDRC's program will be developed by self-directed multidisciplinary teams. These will be able to identify key development issues and mobilize IDRC's intellectual and financial resources to respond rapidly to them. This delivery mechanism will restore freedom to program staff which was being eroded by dysfunctional structures and additional layers of obligatory consultation. However freedom to act will be at a team rather than at an individual level and will be tempered by the necessity of raising additional revenue.

In order for IDRC to retain its standing as an international science organization, the team delivery mechanism must be balanced by equal attention to scientific quality. Otherwise partners in the South will be shortchanged and IDRC's comparative advantages will erode. Scientific quality, as defined below, must be assured throughout IDRC's program: in its development, implementation, monitoring, and renewal.

The challenge is to find the mechanisms which maximise the advantages of team delivery with guarantees of scientific quality. The proposals below suggest structural and managerial arrangements to do this.

Scientific Excellence

A key objective of IDRC is to be a learning organization in which continued scientific excellence is an important component. This means that its program staff must be full members of the scientific community, drawing from that community but also contributing to it. In the context of IDRC's mission, this membership does not imply that all Centre program staff should be making major research contributions to their field of study. It does mean, however, that they should be keeping up to date with developments in their field and making some contribution to these developments.

But scientific excellence in the context of IDRC means more than its staff being good scientists, it also means that they are good research managers, good knowledge brokers, and good at fostering innovation. The Task Forces uses the term "scientific excellence" as a shorthand for excellence in science, technology, innovation, management and knowledge brokering. Indeed, when the Task Force refers to "science" in this report, it includes both science and technology, and encompasses both Research and Development considerations.

The concern with finding mechanisms to ensure scientific excellence is in part to make certain that the Centre itself retains the reputation that it already has for scientific excellence. It is also to ensure that its staff continue to develop their personal skills and international reputation.

Scientific Leadership in Multidisciplinary Research

The following are some of the elements of sound interdisciplinary work:

- agreement on common objectives and goals to solve problems;
- understanding of the complexity of development problems, of the range of possible interventions along multidisciplinary and disciplinary lines and the cause and effect interactions (ie social, economic and environmental);
- choice of the most appropriate research approaches and methods;
- definition of roles and responsibilities of team members;
- mutual respect of disciplines;
- leadership but not dominance; and,
- flexibility in the implementation of team work.

Work in interdisciplinary teams does not preclude the need for specialized knowledge. On the contrary, many interventions require work along disciplinary lines, but these have to be undertaken with an understanding of their interactions with other disciplines. This means that to gain respect within and outside teams, scientists must be experts in their own field, while having a basic understanding and knowledge of the holistic nature of the problem, and the roles of other disciplines.

The Centre thus needs mechanisms to promote excellence in both multidisciplinary and disciplinary work. Team Leaders are crucial in building cohesiveness and providing leadership. They have to be able to judge the relevance of research to address specific development problems. However, very rarely, will they be in a position to judge the scientific quality of more specialized work in disciplines other than their own.

II. THE CENTRE'S INTELLECTUAL FRAMEWORK: A CORPORATE PROGRAM FRAMEWORK

A CPF is an essential element in ensuring scientific excellence since it provides the intellectual framework within which multidisciplinary teams develop programs and projects. It sets boundaries, and promotes coherence and synergy. It helps the Centre avoid too easy an acceptance of development trends. It also commits it to persistence when scientific research for development indicates that further work will be fruitful.

The CPF is an evolving framework which must build on both knowledge from outside the Centre and results from Centre-funded research. It has to reflect the Centre's intellectual capital and current expertise and focus on scientific ideas that will be relevant to development tomorrow. The Task Force suggests that the CPF be drawn up by the internal Interdisciplinary Scientific Committee (ISC) led by the VP Programs with substantial input from the external Science Advisory Committee (SAC) (see below). Senior Management will determine how it will contribute to the CPF process and will endorse and submit the final CPF document to the Board of Governors.

The CPF will be more important in the future in the absence of disciplinary divisions. It positions the Centre's choice of the areas of research it will support with regards to:

the current problem set for international development by identifying the key 'global' issues;

the scientific merit, legitimacy and tractability of the problems to be researched;

the larger Canadian political context within which the Centre exists; and,

the capacity of the Centre, working with its partners, to make a difference.

The CPF signals to the Board, Centre staff and the outside world the characteristics of scientific excellence and innovation that is the hallmark of IDRC's work and a primary justification for Canada's support for international development research.

An effective CPF will:

engage staff fully in its planning and implementation;

attract sound and exciting proposals;

attract the best collaborators (researchers, donors, private sector, government);

attract qualified staff; and,

permit staff to develop their careers in science.

III. THE EXTERNAL CONNECTION: REVITALIZING THE CENTRE'S KNOWLEDGE BASE

The Centre must seek formal and continuing relationships with the global scientific community as both a commitment to and a test of its scientific excellence. Excellence in science supposes on-going interaction with scientific developments worldwide in terms of ideas (new concepts, new hypotheses to be tested), of new data, methods and applications, of peer review and of contribution to building up respective knowledge bases.

There are several ways to ensure that this happens while the bulk of the Centre's program activity is being conducted by multidisciplinary teams working on particular development issues.

The CPF: the link to external science at the corporate level

A Science Advisory Committee (SAC) will help shape and review the CPF. It will report to the Senior Management of the Centre through the Vice President Program. Its advice will contribute to the design of the CPF and to the periodic reviews and adjustments of this document over its life span. In addition to the VP Programs and the Research Manager (see below), an interdisciplinary membership will include representatives from:

- (a) leading scientists in the South and the North; and,
- (b) the Canadian scientific and policy communities and the private sector.

Terms of Reference for the SAC

To advise the VP Programs on the choice, research tractability and coherence of a set of Research Themes;

To assist the VP Programs in a periodic review of progress;

To advise the VP Programs on any scientific issue at the request of the VP Programs.

Options to facilitate a link between external sciences and the Centre at the Program level

The following arrangements will facilitate regular links between external science and the Centre at the Program Level. The options are presented in order of preference. They are not all mutually exclusive. The Task Force's recommended combination is indicated at the end of this report.

1. Regular use of Science Advisory Panels: In addition to the SAC the Centre would set up advisory panels for each Research Theme with membership drawn from scientists in the North and the South. Members would commit to following the development, implementation evaluation and evolution of the Research Theme over a medium term period (4-5 years) to get worthwhile input and feedback. The panels would "meet" electronically with occasional face to face meetings if required.

Pro: Provision of specialized scientific advice on specific on-going issues as well as a technical support system for senior scientists and Team Leaders;

Peer review setting for Research Theme publications;

Gives recipients access to a wider scientific community;

Identifies opportunities to build on others' work;

Con: Requires clear TORs to prevent members or their institutions using IDRC or lobbying the Centre to advance proposals in which they are involved;

Labour intensive to coordinate;

Requires careful balance between North and South representation;

Could make focus harder to achieve.

2. Institutional linkages with Canadian institutions: The Centre would choose a small number of Canadian universities and research institutes as partners on an on-going basis. In reserving this option for Canadian institutions the Centre recognizes them as gateways to the world scientific community. Partnerships could include cross appointments (without physical relocation), membership of advisory panels, joint authorship of articles in refereed journals, contracts to evaluate a certain line of Centre projects, joint development and delivery of training programs such as the MA Economics in Cuba with Carleton, and the training program in Agro-forestry with the Universities of Alberta and Laval and CATIE, and possibly management contracts given to the university for sets of related projects. SAREC and ODA use several of these features.

The Centre would invite institutional collaboration with Canadian centres of expertise in a particular research area with the selection decided by a process of open competition to determine the best fit with the objectives of the Centre, complementarity with staff expertise and, willingness to contribute resources to the initiative. The term of the collaborative agreement would be specified.

Pro: Involves Canadians in IDRC activities while contributing to building development capacity in Canada;

Offers on-going relationship with a milieu whose mission is the development, critique and transmission of scientific knowledge. This complements IDRC's capacity building mission which often does not allow it to focus on scientific excellence in the short term;

Provides opportunities for POs to inform themselves about recent literature, to synthesize what they are learning from their project work and to submit it to peer review, hence providing incentives to maintain scientific standards;

Provides an opportunity for IDRC to get feedback on and evaluations of the research it is funding leading to improved quality;

Provides opportunities to give IDRC funded research a better dissemination in the academic community, and hence benefit Southern researchers;

Con: May increase perceptions/expectations that IDRC funds should respond first to the needs of Canadian academics /scientist;

May create situations in which IDRC staff face conflict of interest;

May be costly to set up and maintain (negotiations, salaries, overheads, etc.);

Opens the possibility of interference with choice of projects, excessively academic evaluations, lack of respect for South researchers' problems and priorities;

There is no proven Centre experience with this arrangement.

3. Developing lead institutions in developing regions: Institutions would be selected for their work and reputation in research connected with Centre Research Themes. They offer the promise of establishing long term capacity to undertake research in the Research Theme.

Pro: Offers an opportunity to strengthen the southern input in implementing the CPF;

Assists in implementing IDRC's capacity building mission;

Con: Presents logistical difficulties (virtual affiliation difficult without high class informatics support.

4. Semiannual donor/research institution consultation: Interaction with likeminded institutions could be developed from the base provided by the Centre's support for and involvement in BELANET and on the leadership in PANASIA and eventually other nets for consultations on science and development.

Pro: Provides an opportunity to maintain IDRC profile and to influence the donor community;

Provides an opportunity to develop bases for institutional collaboration /revenue generation at a corporate level;

Provides an opportunity to see what others are doing in areas of mutual interest;

Offers a less expensive method to bring in experts worldwide;

Permits participation to be adapted to subject area;

Con: May Contribute to the perception that donors act as an exclusive club in determining development agendas;

Bellonet is only starting and is untested, there is already a list of priorities its secretariat has to choose from;

Getting commitment from the participants likely to be more difficult to sustain than with an institutional linkage;

Offers less scrutiny of and incentives to IDRC program staff than under an institutional linkage.

5. Exclusive institutional partnership: The Centre could enter into a partnership with one (bilingual, or one anglophone and one francophone) Canadian institution such as the NSI, FOCAL, APEC, RSC, etc. and

develop a think tank set of activities to feed into the CPF and to integrate and disseminate the results from Centre-funded projects.

Pro: Provides a proxy for "In-house" scientific community which would feed into and build on IDRC funded research to raise and maintain scientific standards. This would enable IDRC to play an active and direct role in the evolution of development thinking; provides a vehicle for rapid publication by IDRC program staff;

Facilitates the temporary incorporation of visiting scholars by providing them with a milieu (unlike the present situation where their interlocutors are often travelling);

Provides a home for temporary unassigned program staff which obliges them to contribute to scientific excellence;

Con: Presents the political difficulty of choosing one institution and devoting funding approved for the South to think tank research in Canada;

Presents the difficulty of establishing a world class think tank and journal in a very competitive world.

IV. LINKING SCIENTIFIC EXCELLENCE AND THE MANAGEMENT OF RESEARCH

In setting out options to establish a strong and viable link between scientific excellence and the management of research, the Task Force took account of the framework laid out in Completing the Transition: Strategic Adjustments for IDRC 1995. The following are the relevant elements for the Task Force's mandate:

Intellectual leadership - to maintain the Centre's leadership in knowledge for development and to attract the best minds to join it, or at least to be associated with its work; **self-directed teams** - adaptable and flexible in response to the program structure; an **effective regional presence** - with resources considered a common pool; and, **increased external financing**.

To establish and maintain the link between scientific leadership and research management the Centre must:

- (a) maintain and actively promote scientific excellence among staff and in projects through peer review, recruitment, professional development, etc in activities which are complementary to current program initiatives;
- (b) provide a "home" for scientists who are involved in a range of different Program Initiatives; are in between program teams; or, whose initiative is coming to an end, and provide a mechanism for them to contribute their results to the Centre's knowledge base and

contribute to the dissemination and application of these results;
and,

- (c) make sure that the self-directed program teams carry out their mandates, adopt appropriate approaches and methods and meet performance indicators. While this is largely a management function, continued scientific excellence requires monitoring the coherence of the program initiatives with the CPF.

TO DELIVER PROGRAM

A successful link between scientific leadership and research management enables a grant making institution such as IDRC to deliver its program and to promote and direct the scientific excellence of the professional staff at one and the same time.

Scientific leadership and research management at the corporate level

The previous discussion of the CPF has highlighted the essential role it will play in providing the intellectual framework for scientific excellence at the corporate level.

Scientific leadership and research management at the program level

The VP Programs will have general responsibility for maintaining and promoting scientific excellence, but it is unlikely that she/he will be able to carry this mandate out adequately while also interacting with other donors, the Board of Governors, Senior Management, etc. There is, therefore, a need for an intermediate level of scientific leadership. This can be provided without returning to a divisional, multi-layered management system. There is a range of options to meet this need:

- 1. A Research Division:** This would provide a "home base" for Ottawa and regional office program staff. It would be lead by a Research Manager.

Terms Of Reference for the Research Manager:

Will report to the VP Programs;

will play a key role in enabling collegial co-operation between program staff at headquarters and the regions;

Will be involved in at least one program initiative;

Will assume responsibility for professional development of program staff, including organizing "turnover" of scientists which OHR cannot do effectively and promote and manage in-house research; and,

Will act as chair of the Interdisciplinary Scientific Committee (ISC) [see below].

Pro: Since there would only be one Research Division and one Research Manager there would be no return to disciplinary compartmentalism;

Provides a home for POs, reducing the incentives to keep their respective program initiatives (PI) alive beyond its time and providing an opportunity to write up their work and retool themselves;

Provides a (small) pool of skills for peer review, as a source of advice to the VP Programs on the development of Program Initiatives, hence promotes the turnover of Program Initiatives;

Provides a place for conducting in-house research ie strategic thinking, development of new program initiatives, review of lessons, and for synthesis of results and experience.

Con: The Research Manager could interfere with Program Initiative Teams and compete with the VP Program, thus there would be a need for a clear definition of roles and relationship vis à vis the VP Programs, and clear relations with Program Initiative Team Leaders, and Regional Coordinators.

Does not necessarily respond to the concerns of Program Officers for having a professional/specialized organizational framework;

Could allow Program Officers to "take it easy". This could be avoided by clear assignments.

2. A Group of Chief Scientists: The Centre would identify Chief Scientists who would provide intellectual leadership in order to achieve cohesion and a common sense of purpose among the programmatic initiatives implemented by the self-directed teams within the Research Themes.

A Chief Scientist would take on the overall intellectual leadership role for a Centre Research Theme and would provide professional support to the program staff in the Program Initiative Teams, but would not have a personnel management responsibility. Chief Scientists would themselves be actively involved in one or more Program Initiative. In consultation with the VP Programs and the Regional Coordinators, they would organize periodic review meetings with the Team Leaders of the Program Initiatives and/or with a larger group of professional staff involved in the Research Theme, as demanded by the occasion. In order to fully involve staff in various locations, this would also be done in the form of e-mail conferencing. A Chief Scientist would chair the External Scientific

Advisory Panel for the Research Theme and would be a member of the Interdisciplinary Scientific Committee (ISC -see option 3 below). The designation of 'Chief Scientist' will be held only for the life of a particular Research Theme.

Pro: Integrates activities across headquarters and the regions and across several sub topics within a Research Theme;

Provides a common sense of mission and a larger forum for Program Initiative Team members to test their ideas;

Provides the VP Programs and the ISC with advice on proposed major initiatives and / or in cases of conflict;

Acts as an intellectual spokesperson for the Research Theme;

May act as a mentor to more junior staff;

Organizes reviews and reports for the VP Programs;

Con: Takes time and energy that could be spent working on a program initiative;

Might tend to become permanent managerial positions if appropriate safeguards are not instituted.

3. An Interdisciplinary Scientific Committee (ISC): The Centre would set up a committee of Chief Scientists in Ottawa and in the regions to act as mentors for program staff and advisor to the VP Programs. It would constitute a pool of skills for peer review, internal review of the CPF, selecting new staff, reviewing controversial projects, and interacting with external scientists and institutions, etc.

Chaired by the VP Programs, the ISC would be composed of the Chief Scientists responsible for the intellectual oversight of the Research Themes, three staff senior scientists appointed to the Committee by Senior Management on a rotational basis for periods of no longer than two years; and the Research Manager.

The ISC will have a scientific and technical advisory function. Approval authority will reside with the VP Programs who will act on the recommendations of the ISC.

The main functions of the ISC are:

- a) to coordinate the preparation of the CPF for submission to the Board of Governors;

- (b) to play a major role in maintaining scientific and technical quality in the implementation of the Corporate Program Framework; in program delivery and in the identification of new Centre initiatives;
- (c) to assist the VP Programs in the scientific and technical review and approval of research programs and related activities; and,
- (e) to monitor and assess program implementation, program results, outputs and outcomes and their conformity with performance indicators.

Pro: Provides program advice, review of major projects, and ensures the implementation of the CPF. This would help ensure that issue-based programming maintains scientific rigour and that there is coherence in IDRC's approach to development and between regional and international activities;

Would help resolve conflicts within teams and review their conformity to performance indicators as a group, rather than establishing a reporting relationship between an individual Chief Scientist and the Program Initiative Teams in his/her Research Theme.

Con: Might weaken the challenge to the self-directed teams to assume collective responsibility for their activities by passing the buck to others;

Research Themes might revert the program organization to a disciplinary structure or to multidisciplinary divisional structure as in the CG system.

Scientific Leadership and research management at the team level

The Program Initiative Team is the level of program delivery for the implementation of the CPF. When feasible, the Task Force suggests that each Program Initiative Team be coordinated jointly by two Team Leaders one each from Ottawa and a Regional Office.

The Team Leader will have the following scientific functions:

to ensure scientific quality control of Program Initiative implementation through scientific/technical reviews;

to coordinate and provide advice to team members in the implementation of Program Initiative activities;

to do planning and programming at the level of team activities; and,

to link with Research Theme Chief Scientists and Regional Co-ordinators.

Pro: Could be more flexible and agile;

Provides quality Control to a limited extent;

- Con:
- May be difficult to manage a large number of program initiatives;
 - Requires the Centre to consider management training implications for less experienced staff acting as Team Leaders; and,
 - May be difficult to ensure periodic quality control of the program initiative as well as more specialized control.

Scientific leadership and research management to link the global and regional perspectives

The Guiding Framework for IDRC is provided by a CPF which focuses its efforts on a limited number of major development issues at the intersection of Science and Society which are of pressing concern, international significance and where research for development can make a difference. The increasing globalization of economic and social forces, of communications and of science itself makes it logical that the Centre conceptualize the issues it will tackle at this level. It is important to recognize, however, that the expression of and reaction to international forces varies tremendously by continent, country and even by ethnic group within a nation state. The challenge that faces the Centre is to deal effectively with this variability while integrating these efforts logically and effectively in their international context.

The recent clustering exercise in many cases did not achieve the necessary coherence between regional and global programmatic initiatives if the above goal is to be met, although in many cases the potential to do so is apparent. The question is: how can the Centre organize its program initiatives in such a way that they have operational agility and local relevance and impact while achieving the global integration to make the difference in the international debates?

Structurally, the Task Force recommends doing so by selecting program initiatives according to the Research Themes and through the system of Chief Scientists charged with achieving global cohesion among programmatic initiatives, many of which will be regionally based. A useful way of testing the feasibility of such a system of regional flexibility with global focus and coordination is by considering types of research where local specificity is particularly acute and where responsiveness to local conditions is essential for achieving success.

During the recent analysis of Participatory Research at IDRC by the Evaluation Unit, the question was explicitly asked -- how the particular local community nature of participatory research could be reconciled with the imperative for large initiatives which have an international impact. The solution was through a network which ties a number of country specific research activities together

under regional coordination, which is integrated through an international coordination process.

Scientific and Policy advice by world class practitioners in the field were efficiently made available at the international level and disseminated throughout the levels of the network, thus strengthening the scientific quality of the whole; while also serving to bring the local and regional research findings to a larger audience. The problem is also reflected in the Centre's quest to integrate local level (grassroots) indicators of sustainability into regional, national and international systems.

Concretely for IDRC, the local specificity and responsiveness to local conditions and opportunities is provided by its field staff, with management and coordination provided by the Regional Coordinators. (In the case of Asia and Africa this would be at two levels, corresponding to sub continental and continental levels.) Global coherence and coordination is the function of the Research Theme working groups chaired by the Chief Scientists. International scientific and policy advice is provided by the advisory panels to the Research Themes which would also represent an important conduit for the dissemination of noteworthy research results.

Some management considerations

It is imperative that the Centre's procedures for research management provide for the checks and balances that will enable the Board and the Senior Management to demonstrate to the Parliament of Canada quality control, compliance with the mandate, and conformation of the staff (and teams) with the spirit and the letter of the CPF. This means , among other things, that Senior Management will have to set appropriate authorization levels and approval mechanisms. The Task Force recommends that the ISC be tasked with establishing the criteria for the selection of, and allocation of funds to, program initiatives. The mandate of the Task Force does not include proposing these funding levels but the Task Force flags the necessity of setting them.

Similarly, the Task Force cannot determine the number of Research Themes or program initiatives. However, we suggest that this is a **key consideration** for the Senior Management when considering the options presented in this report. The Task Force believes that the recommendations made in this section become less feasible as the number of Research Themes exceeds five and the number of Program Initiatives exceeds fifteen.

The Task Force also recommends that program staff limit their core contribution to a maximum of two Program Initiatives. Involvement in more raises doubts

about maintaining scientific excellence when technical expertise is spread so thinly.

Senior Management will have to address the question of titles that respond to both internal and external requirements (see page 17 paragraph 1).

Senior Management should note that Team Leaders are being requested to fulfil management functions and appropriate selection procedures and training will have to be provided.

Monitoring and evaluation

The Centre needs mechanisms to ensure that scientific quality is being achieved at all levels: CPF, Research Themes, Program Initiatives, and Projects.

While the periodic review of progress in the implementation of the CPF and Research Themes will be a primary responsibility of the VP Programs, with the support from the SAC and ISC, other, more specific mechanisms, will have to be put in place at the other levels.

At the level of Program Initiatives and projects, internal and external monitoring and evaluation should be considered. Financial constraints, and the reorganization has much affected these functions over the past few years. However, if the Centre is to maintain high standards in its work, facilities should be provided to ensure that appropriate monitoring and evaluation takes place building on the foundations laid over the last few years by the Evaluation Unit. These could be accomplished through:

External Reviews

Periodic reviews of major program initiatives: These would have to be well designed to ensure their effectiveness and would include: a priori definition of criteria and indicators of achievements ("milestones"), terms of reference for evaluators and criteria for their selection, the appropriate constitution of mixed teams (with at least one member from a recipient institution).

Internal Reviews

Annual progress reports: Team Leaders would have to produce an annual report of activities. The reports would be reviewed by Centre management and the Interdisciplinary Scientific Committee. This could be combined with an annual meeting to review and plan

activities for the next fiscal year. A meeting could also serve as a mechanism to exchange experiences across program initiatives and to reinforce the 'corporate approach to accountability'.

Monitoring of projects/program initiatives: should be done at least once, and more frequently as the complexity of the task requires.

Monitoring visits by senior scientists/Chief Scientists would also be desirable.

To operationalize these mechanisms, budgetary provisions will have to be made. Ideally travel budgets would be allocated individually to team members, but under the signing authority of the Team Leader. This would encourage more efficient use of travel funds, rather than having a common travel pot.

TO PROMOTE AND DIRECT THE SCIENTIFIC EXCELLENCE OF PROFESSIONAL STAFF

The Centre's reputation and comparative advantage, including current and future capacity to generate revenue, depends critically on the scientific excellence and reputation of its staff. Opportunities and incentives for staff to remain up to date in their fields and with current issues and approaches to development thinking has always been a subject of concern within the Centre. The move to self-directed programmatic teams, with concomitant demands to generate revenue, manage the program initiatives and build networks, among other things, risks making scientific excellence a low priority because of these immediate demands. This would not be in the interest of the Centre's medium to long term health.

Rewarding excellence

It is important that the incentives, opportunities and mechanisms be kept or put into place in the new structure to maintain, renew and reward individual expertise and performance. In this context, the Task Force notes the importance of an incentive structure review, recognize and reward excellence in science and in the management of science. The imperative to streamline structure and controls should not erode these incentives nor diminish the ability of staff to move to more senior scientific positions within the organization.

The Centre's capacity to attract first class new staff will also be enhanced by a perception that a period of time dedicated to IDRC improves the individual's future opportunities. In this context, it would be useful to review where people go after IDRC and to consider targeted ways to improve the capacity of staff to take such opportunities, either on an interim or on a permanent basis.

IDRC is a unique institution. It requires professional staff that encompasses a wide range of skills, including, *inter alia*: knowledge of science and its application to solving development problems, ability to communicate with a wide range of stakeholders, research management capability, ability to organize and manage networks, and an increasingly important capacity to negotiate with other donors, government representatives, and the private sector to lever funds, etc. Most often these skills are developed through several years of experience on the job. Therefore, one of the key incentives to retain qualified staff is to provide them with opportunities and a career path.

With a flatter organization, rewards will not necessarily lead to managerial positions. Leadership of teams and/or Research Themes is a temporary assignment. Therefore, a system which rewards and differentiates the technical staff according to their experience, skills and productivity needs to be strengthened. Thus categories such as: Program Officers, Senior Program Officer, Principal Program Officer, Senior Scientist, etc. will need to be reaffirmed or defined in light of the new arrangements.

The following are proposed:

1. Sabbaticals and in house research for developing new program areas.

An excellent example of the potential value of such focused sabbaticals for IDRC is David Glover's sabbatical to bring himself up to date in the field of environmental economics and to start the EEPSEA initiative.

Pro: Provides the time, space and contacts for staff to become up to date with the state of the art in order to develop innovative new program initiatives;

Con: Risks leaving a gap such that the person involved would not be involved in regular program activities.

2. Instituting regular staff exchanges or secondments with academic and research institutions in Canada and in the South. Such exchanges would make it possible for IDRC staff to work directly in a focused area of research or teaching, while giving staff in the partner institution an opportunity to become exposed to a wide range of development issues, approaches and institutions. It could be characterized as an exchange of depth for breadth.

Pro: Renews IDRC staff and brings in fresh ideas;

Con: Require time and effort to organize the exchanges and time to train the exchange in IDRC activities and procedures.

3. Disciplinary seminar series cutting across the Research Themes. These would feature both presentations by IDRC staff on research issues critical to their work and by invited external speakers. It would be desirable to provide modest funds and to organize three to four such series in the Life Sciences, Physical and Engineering Sciences and Social Sciences.

Pro: Provides a forum for new ideas, stimulates staff to read and write and helps to keep staff up to date in their disciplinary fields;

Con: Requires that time be made available to staff to prepare and participate.

4. An explicit expectation that the sets of program initiatives which cover a particular thematic area would periodically publish their results in either a book form or as a series of articles. Organizing this would be one of the responsibilities of the Chief Scientist(s) who provide intellectual leadership for the Research Themes and of the Program Initiative Teams.

Pro: Increases the visibility and reputation of IDRC, which enhances chances of obtaining co funding;

Stimulates staff to keep up to date;

Becomes part of IDRC's internal learning and evaluation;

Con: Reduces time available to develop new initiatives.

5. Encouraging Visiting Research/Sabbatical Fellows. Most such Fellows would be supported by the Fellow's home institution, but would contribute to the intellectual life and vitality of the Centre. They could be housed either in Regional Offices or in headquarters, with the expectation that at least half of their time would be to contribute to a particular Research Theme or programmatic area and that they present a seminar at the end of their stay. A model to consider would be the Visiting Research Associate program at the Institute of Developing Economies in Japan which also publishes the Fellows' intellectual contributions and research results if these are judged to be of sufficient quality.

Pro: Increases and improves external contacts and improves the overall scientific capacity of IDRC.

Con: Requires IDRC to provide office and computer space, library and communications services and organize the integration of the Fellow to provide a collegial and productive research atmosphere.

6. Encouraging the preparation of papers to present in scientific meetings and conferences. These could be based on literature reviews in areas in which the Centre is active or wishes to explore, or could focus on a presentation of present results of IDRC-supported or in-house research.

- Pro: Improves the visibility and competence of IDRC and its staff;
Increases the range of external contacts;
Helps to identify new opportunities, approaches and research challenges;
- Con: Requires that the Centre allocate sufficient time and resources for travel and conference participation.

7. Short Term Training or Study Leave in Centres of Excellence. This would be important in new research areas such as environmental economics, gender analysis and biotechnology or when staff are required to change research fields.

- Pro: Keeps staff up to date without inordinate time investment;
Improves contacts with centres of excellence;
- Con: Requires time and budget for tuition, travel and lodging.

Finally, it is important that a clear understanding be reached within the Centre about the proportion of professional staff time that should be set aside and dedicated to these activities. The three years of transition, with its emergency demands, has considerably eroded the time most staff have had to maintain this expertise. The Task Force would recommend that a target of 20% be set within the new structures and procedures.

V. THE TASK FORCE'S RECOMMENDATIONS/PREFERRED OPTIONS

In the very short time available, the Task Force examined several options and agreed on a preferred set of arrangements. In most cases, after reviewing the pros and cons, members agreed on one option. The report sets out the pros and cons of each of these preferred options. In the case of institutional linkages, members identified five viable options which are listed in order of preference: the Task Force suggests a combination of 1 and 2.

This set of arrangements provides the three elements the task force identified as required to ensure scientific excellence: an intellectual framework, systematic connections with the scientific community and a strong link between scientific excellence and research management and program delivery.

Therefore, the Task Force suggests:

the setting up of an *external* **Scientific Advisory Committee (SAC)** and an *internal* **Interdisciplinary Scientific Committee (ISC)** both to be chaired by the VP Programs;

the submission to the Board of a **Corporate Program Framework**, drawn up by the ISC with significant input (and on-going feedback on its implementation) from the SAC and from program staff, to serve as the **intellectual framework** and reference point for the Centre's programming;

the use of external **Scientific Advisory Panels** to advise and provide scientific support to Research Theme programming;

the establishment of **institutional linkages** between the Centre and the rest of the scientific community;

an **intermediate level of scientific leadership** between the VP Programs and the self-directed teams in terms of:

(i) a **Research Division** headed by a **Research Manager** to provide a 'home' and an internal scientific milieu for program staff not assigned to Program Initiatives on a full time basis; and,

(ii) a **Group of Chief Scientists** assigned for a specific time period to provide intellectual leadership to each of the Research Themes; and,

(iii) a **reinforcement of support for enhancing and maintaining the scientific excellence of professional staff** in terms of the Centre's expectations and the incentives it offers to encourage staff to fulfil these expectations.

Successful implementation of these suggestions requires a number of complementary managerial decisions. These are outside the Task Force's mandate but are flagged for future reference.